WHAT IS CLAIMED IS:

1. A frame synchronization apparatus and method using an optimal pilot pattern, comprising the steps of:

storing column sequences demodulated and inputted by slots, in a frame unit, in detecting frame synchronization for upward and downward link channels;

converting the stored column sequences according to a pattern characteristic related to each sequence by using the pattern characteristic obtained from the relation between the column sequences;

adding the converted column sequences by slots; and

performing a correlation process of the added result to a previously designated code column.

2. The method as claim 1, wherein said converting step comprises the steps of shifting, reversing and inverting the single column sequence to thereby generate the remaining column sequences.

3. A frame synchronization apparatus using an optimal pilot pattern comprising:

a memory mapping/addressing block for converting column sequences inputted/demodulated by slots according to a defined pattern characteristic;

an adder for adding the converted outputs from the memory mapping/addressing

block; and

a correlator for performing a correlation process of the added result to a previously

~~designated code column.~~